

Appln. No. 10/803,515

Attorney Docket No. 10541-1934

**I. Listing of Claims**

1. (Currently Amended): An air induction system for inducting air into an engine of an automobile, the system comprising:

a duct in fluid communication with the engine of the automobile for directing inducted intake air into the engine; and

a first compliant member formed in a wall of a quarter wave tuner, wherein the quarter wave tuner is connected to the duct, and wherein the duct is made of a first material and the compliant member is made of a second material that flexes as a result of an internal pressure fluctuation during air induction into the engine; ~~and~~

~~the compliant member is disposed on a quarter wave tuner of the air induction system.~~

2. (Currently Amended): The air induction system of claim 1 wherein the first compliant member further comprises is an aperture disposed along a length of the wall of the duct and covered with the second material.

3. (Original): The air induction system of claim 2 wherein the second material is a thermoplastic elastomer.

4. (Original): The air induction system of claim 3 wherein the thermoplastic elastomer is an olefin/polypropylene blend.

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5. (Currently Amended): The air induction system of claim 1 wherein a the first compliant member is located at a portion of an air inlet tube of the air induction system that allows for dissipation of one or more acoustic standing waves.

6. (Original): The air induction system of claim 1 wherein the first material is a polymer.

7. (Currently Amended): The air induction system of claim 1 wherein the first compliant member has a thickness that is less than half of a thickness of the wall of the duct.

8. (Original): The air induction system of claim 1 wherein the aperture is an elongated slot.

9. (Currently Amended): The air induction system of claim 1 wherein further comprising a second the compliant member is disposed on a resonator of the air induction system.

10. (Cancelled).

11. (Currently Amended): The air induction system of claim 1 wherein further comprising a third the compliant member is disposed on a wall of an air filter box in fluid communication with the duct of the air induction system.

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12. (Currently Amended): A method for reducing noise generated in an air induction system, the method comprising:

determining a length of an air duct;

determining a location along the duct where a maximum pressure of an acoustic standing wave is present;

forming a flexible portion into ~~a portion of a wall of a quarter wave tuner~~ connected to the duct; and

~~coupling a quarter wave tuner to the duct; and~~

positioning the flexible portion at the location of the maximum pressure of the acoustic standing wave.

13. (Original): The method of claim 12, further comprising forming the duct out of a first material.

14. (Original): The method of claim 12, further comprising forming the flexible portion out of a second material.

15. (Original): The method of claim 14, wherein forming the flexible portion out of a second material further comprises over-molding the second material over the duct.

16. (Original): The method of claim 12, wherein forming a flexible portion further comprises forming an aperture in the portion of the duct.

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17. (Original): The method of claim 16, wherein forming a flexible portion further comprises covering the aperture with a thin layer of a polymer material.

18. (Original): The method of claim 16, wherein forming a flexible portion further comprises covering the aperture with a thin layer of an olefin/polypropylene blend.

19. (Original): The method of claim 12, wherein forming further comprises fixing the thin layer of polymer material to the duct over the aperture.

20. (Currently Amended): An air induction system for inducting air into an engine of an automobile, the system comprising:

a duct in fluid communication with the engine of the automobile for directing inducted intake air into the engine;

a first compliant member formed in a wall of a quarter wave tuner connected to the duct, wherein the duct is made of a first material and the first compliant member is made of a second material that flexes as a result of an internal pressure fluctuation during air induction into the engine; and

wherein the first compliant member has a thickness that is less than half of a thickness of the wall of the quarter wave tuner the duct.

21. (Previously Presented): The air induction system of claim 1 wherein the compliant member further comprises an aperture disposed along a length of the duct covered with the second material.

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22. (Previously Presented): The air induction system of claim 2 wherein the second material is a thermoplastic elastomer.

23. (Previously Presented): The air induction system of claim 3 wherein the thermoplastic elastomer is an olefin/polypropylene blend.

24. (Currently Amended): The air induction system of claim 1 wherein a further comprising a second compliant member is located at a portion of an air inlet tube of the air induction system that allows for dissipation of one or more acoustic standing waves.

25. (Previously Presented): The air induction system of claim 1 wherein the first material is a polymer.

26. (Previously Presented): The air induction system of claim 20 wherein the aperture is an elongated slot.

27. (Currently Amended): The air induction system of claim 20 wherein the further comprising a second compliant member is disposed on a resonator of the air induction system.

28. (Cancelled):

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29. (Currently Amended): The air induction system of claim 20 ~~wherein the~~  
further comprising a third compliant member is disposed on an air filter box in fluid  
communication with the duct of the air induction system.

30. (Currently Amended): A method for reducing noise generated in an air  
induction system, the method comprising:

determining a length of an air duct;

determining a location along the duct where a maximum pressure of an  
acoustic standing wave is present;

forming a flexible portion into ~~a portion of a wall of a quarter wave tuner~~  
connected to the duct, wherein the flexible portion has a thickness less than half the  
thickness of the duct; and

positioning the flexible portion at the location of the maximum pressure of the  
acoustic standing wave.

31. (Previously Presented): The method of claim 30, further comprising  
forming the duct out of a first material.

32. (Previously Presented): The method of claim 30, further comprising  
forming the flexible portion out of a second material.

33. (Previously Presented): The method of claim 32, wherein forming the  
flexible portion out of a second material further comprises over-molding the second  
material over the duct.

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34. (Previously Presented): The method of claim 30, wherein forming a flexible portion further comprises forming an aperture in the portion of the duct.

35. (Previously Presented): The method of claim 34, wherein forming a flexible portion further comprises covering the aperture with a thin layer of a polymer material.

36. (Previously Presented): The method of claim 34, wherein forming a flexible portion further comprises covering the aperture with a thin layer of an olefin/polypropylene blend.

37. (Previously Presented): The method of claim 30, wherein forming further comprises fixing the thin layer of polymer material to the duct over the aperture.

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